WHAT IS CLAIMED IS:

1. A compression molding method, comprising:

positioning a film adjacent a first die structure such that a particular mold block coupled to the film is located in a die cavity in the first die structure, the particular mold block comprising mold compound and at least substantially holding its own shape;

positioning an integrated circuit structure adjacent a second die structure, the integrated circuit structure including one or more integrated circuit devices coupled to a substrate; and

moving at least one of the first die structure and the second die structure toward the other die structure to cause the integrated circuit structure to compress the particular mold block within the die cavity in order to form a mold cap covering at least one of the one or more integrated circuit devices.

2. The method of Claim 1, wherein:

the cavity in the first die structure is wider than the die cavity in a first direction such that one or more unfilled portions of die cavity exist around the particular mold block before the particular mold block is compressed; and

compressing the particular mold block causes the particular mold block to deform such that the mold compound of the particular mold block at least partially fills the one or more unfilled portions of the die cavity.

3. The method of Claim 1, wherein:

the die cavity is wider than the particular mold block in a first direction and longer than the particular mold block in a second direction; and

the particular mold block is deeper than the die cavity in a third direction.

4. The method of Claim 3, wherein the particular mold block is less than or approximately equal to 0.8 times the width of the die cavity in the first direction and less than or approximately equal to 0.8 times the length of the die cavity in the second direction.

5. The method of Claim 1, wherein the volume of the particular mold block is approximately equal to or slightly greater than the volume of the die cavity such that little or no mold compound escapes from the die cavity during the compression of the particular mold block.

6. The method of Claim 1, wherein the mold compound comprises a solid, a gel or a paste.

7. The method of Claim 1, wherein the mold compound comprises silicon.

8. The method of Claim 1, further comprising:

removing the film, mold cap, and integrated circuit structure from the die cavity; and

advancing the film such that another mold block is located in the die cavity.

9. The method of Claim 1, further comprising coupling a prefabricated film roll to a film advancement apparatus operable to advance the film such that the particular mold block coupled to the film is located in the die cavity, the prefabricated film roll comprising a roll of the film having a plurality of mold blocks including the particular mold block coupled thereto.

10. The method of Claim 1, wherein:

a plurality of mold blocks including the particular mold block are coupled to the film;

moving at least one of the first die structure and the second die structure toward the other die structure to cause the integrated circuit structure to compress the particular mold block within the die cavity causes one or more portions of the film proximate the particular mold block to deform;

the method further comprises advancing the film in a first direction such that a following one of the plurality of mold blocks is located in the die cavity; and

the distance between the particular mold block and the following mold block is sufficient to ensure that the one or more deformed portions of the film proximate the particular mold are free from the area between the first die structure and the second die structure when the film is positioned such that the following mold block is located in the die cavity.

11. The method of Claim 10, wherein:

one or more surfaces of the first die structure come into contact with one or more surfaces of the second die structure during the compression of the mold block to form one or more contact regions;

the distance between the particular mold block and the following mold block is greater than or equal to the total length of the one or more contact regions in the first direction.

12. The method of Claim 1, wherein at least one of the width or length of the die cavity is greater than twenty times the depth of the die cavity.

13. An integrated circuit package formed at least by:

positioning a film adjacent a first die structure such that a mold block coupled to the film is located in a die cavity in the first die structure, the mold block comprising mold compound and at least substantially holding its own shape;

positioning an integrated circuit structure adjacent a second die structure, the integrated circuit structure including one or more integrated circuit devices coupled to a substrate; and

moving at least one of the first die structure and the second die structure toward the other die structure to cause the integrated circuit structure to compress the mold block within the die cavity in order to form a mold cap covering at least one of the one or more integrated circuit devices.

14. The integrated circuit package of Claim 13, wherein before the mold block is compressed:

the die cavity is wider than the mold block in a first direction and longer than the mold block in a second direction; and

the mold block is deeper than the die cavity in a third direction.

15. The integrated circuit package of Claim 14, wherein before the mold block is compressed, the mold block is less than or approximately equal to 0.8 times the width of the die cavity in the first direction and less than or approximately equal to 0.8 times the length of the die cavity in the second direction.

16. The integrated circuit package of Claim 13, wherein before the mold block is compressed, the volume of the mold block is approximately equal to or slightly greater than the volume of the die cavity such that little or no mold compound escapes from the die cavity during the compression of the mold block.

17. The integrated circuit package of Claim 13, wherein the mold compound comprises a solid, a gel or a paste.

18. The integrated circuit package of Claim 13, wherein the mold compound comprises silicon.

19. The integrated circuit package of Claim 13, wherein at least one of the width or length of the die cavity is greater than twenty times the depth of the die cavity such that at least one of the width or length of the formed mold cap is greater than twenty times the depth of the formed mold cap.

20. A compression molding method, comprising:

coupling a prefabricated film roll to a film advancement apparatus, the prefabricated film roll comprising a roll of a film having a plurality of mold blocks including the particular mold block coupled thereto;

using the film advancement apparatus operable to advance the film such that a mold block coupled to the film is located in a die cavity in the first die structure, the mold block comprising mold compound and at least substantially holding its own shape, the mold compound comprising a solid, a gel or a paste;

wherein the die cavity is wider than the mold block in a first direction and longer than the mold block in a second direction such that one or more unfilled portions of the die cavity exist around the mold block before the mold block is compressed;

coupling an integrated circuit structure to a second die structure, the integrated circuit structure including one or more integrated circuit devices coupled to a substrate; and

moving at least one of the first die structure and the second die structure toward the other die structure to cause the integrated circuit structure to compress the mold block within the die cavity to cause the mold block to deform such that the mold compound of the mold block at least partially fills the one or more unfilled portions of the die cavity and forms a mold cap covering at least one of the one or more integrated circuit devices.